

REMARKS

A. 35 U.S.C. § 112, First Paragraph

In the Office Action mailed on February 13, 2003, claim 2 was rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way to enable one skilled in the art to make and/or use the invention. In particular, the rejection asserts that there is no support in the specification for claim 2's recitation that the housing is oscillation insensitive. Applicants traverse this rejection. From page 10, line 20 to page 11, line 6, Applicant's specification describes an embodiment where the scanning graduation structure 6 is arranged level or flat as directly as possible on the housing so that the arrangement of the scanning graduation structure 6 results in particular insensitivity to oscillations. Clearly, if the scanning graduation structure is arranged on a portion of the housing and the scanning graduation structure at that portion is insensitive to oscillations, the housing, at least at the portion of the housing, must be insensitive to oscillations. One of ordinary skill would be able to make at least a portion of a housing insensitive to oscillations. Since the description at pages 10 and 11 enables one of ordinary skill in the art to make and/or use the recited invention of claim 2, the rejection is improper and should be withdrawn.

Despite the imperfection of the rejection, claim 2 has been amended to recite that the scanning graduation structure is arranged on a part of the housing that is insensitive to oscillations. The invention of claim 2, as amended, is enabled for the reasons stated above. Accordingly, the rejection should be withdrawn.

As mentioned above, claim 2 has been amended to clarify Applicants' invention. In particular, the phrase "housing is oscillation insensitive" has been amended to read as "housing

which is insensitive against oscillations.” Since the phrases have the same scope and meaning, the amendment of the phrase is not being presented for reasons of patentability as defined in *Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd*, 234 F.3d 558, 56 USPQ2d 1865 (Fed. Cir. 2000) (*en banc*), *overruled in part*, 535 U.S. 722, 122 S. Ct. 1831 (2002).

B. 35 U.S.C. § 103

1. Ishizuka et al.

Claims 1-13 and 17-19 were rejected under 35 U.S.C. § 103 as being obvious in view of Ishizuka et al.¹ Applicants traverse this rejection for several reasons. First, the rejection fails to recite each and every element in Ishizuka et al. that is being relied on in Ishizuka et al. to reject the claims. Instead, the Office Action makes a general statement that Ishizuka et al. discloses all elements recited in the claims except a housing. This type of rejection leaves it to the Applicants to guess the basis for the rejection. Since this is unfair to the Applicants, Applicants demand that a complete analysis for the rejection be given in the next Office Action should the rejection be repeated. Note that such an analysis is improper since it does not provide a clear explanation of the grounds of rejection as required under MPEP §§ 707.07(d) and (f). If no such analysis is

¹ It is noted that on page 3, lines 12-23 and page 4, line 6 there is made reference to the reference Huber instead of Ishizuka et al. The undersigned attorney called Examiner Natividad on May 7, 2003 regarding this contradiction. Examiner Natividad informed the undersigned attorney that the Section entitled “Response to Arguments” should be ignored since the Section only regarded Applicants’ arguments made in the Amendment filed on October 28, 2002 regarding Huber. The undersigned pointed out that if this was the case, then the rejection based on Ishizuka et al. would not recite each and every element in Ishizuka et al. that was being relied on to reject the claims. The undersigned pointed to Examiner Natividad that this would be unfair to the Applicants since it would force them to guess the reasoning behind the rejection. Examiner Natividad then agreed to consult with his Supervisor to determine whether a new Office Action should be rendered. On May 9, 2003, Examiner Natividad left the undersigned attorney a message that no new Office Action would be rendered since the rejection was adequate as set forth in the current Office Action.

given, then Applicants will take that as an admission that Ishizuka et al. does not render the claims obvious.

A review of Ishizuka et al. reveals that Ishizuka et al. fails to disclose a number of elements recited in claim 1. This is demonstrated by a review of the operation of the embodiment of FIG. 1 of Ishizuka et al., which is representative of the other embodiments described in Ishizuka et al. As shown in FIG. 1, a light beam R is generated by light source 1 and directed onto a diffraction grating G1. The light beam R is diffracted by the diffraction grating G1 causing 0th order and +1st order beams R_0 and R_{+1} to be projected onto a rotary diffraction grating G2 at points P2b and P2a, respectively. As shown in FIG. 1, the two beams impinging on grating G2 are further diffracted as rays R_0^{+1} and R_{+1}^{-1} that impinge on a further grating G3 wherein diffracted light from G3 is sent to a detector.

In contrast, claim 1 recites that “the beams of light emitted by the light source first reach the measuring graduation structure,” which is associated with a rotatable graduated disk. As mentioned above, Ishizuka et al.’s beam first reaches graduation G1 before reaching the rotatable graduation G2. Since Ishizuka et al. does not disclose or suggest rearranging graduation G2 so that the light beam R reaches it first, the rejection is improper and should be withdrawn.

The rejection of claim 1 is improper for the additional reason that Ishizuka et al. fails to disclose or suggest using a transmission measuring graduation structure. As shown by the embodiments of FIGS. 1-9, the measuring graduation G2 is a reflection measuring graduation structure. The reason that Ishizuka et al. uses a reflection measuring graduation is that “a small and thin size of the overall apparatus” (see Abstract) is desired. Accordingly, Ishizuka et al. teaches away from using the larger apparatus that would entail if a transmission measuring

graduation were employed. Without suggestion to alter graduation G2 to be a transmission measuring graduation structure the rejection is improper and should be withdrawn.

The rejection of claim 1 is also improper because Ishizuka et al. fails to disclose or suggest using arranging a measuring graduation structure to be “located between the scanning unit and the scanning graduation structure.” As shown in FIGS. 1-9 of Ishizuka et al., the measuring graduation G2 faces both grating G1 and grating G3 and is not located between the two. Since there is no suggestion for locating graduation G2 between gratings G1 and G3, the rejection is improper and should be withdrawn.

In summary, the rejection of claim 1 is improper because the Office Action has failed to provide a prima facie case showing that the numerous differences between the claimed invention and Ishizuka et al. noted above would have been obvious to one of ordinary skill in the art. Indeed, the Office Action has only stated that “it is notoriously well-known in optical arts to enclose components, for a motivation of e.g. improving signal by reducing noise from ambient light.” The Office Action’s statement is silent as to using a housing, connecting a scanning unit to a housing, using a reflection scanning graduation that is arranged directly on a housing, having light first reach a measuring graduation and arranging a measuring graduation structure to be located between the scanning unit and the scanning graduation structure. This silence is easily explained. The Office Action is using improper hindsight and Applicants’ own disclosure to improperly reject the claims. Accordingly, the rejection should be withdrawn.

A further sign that improper hindsight is being used to reject the claims is seen by a review of the rejections of the dependent claims. For example, claim 2 recites that the scanning graduation structure is arranged on a part of the housing which is insensitive against oscillations.

The Office Action has provided no motivation for using such an arrangement and so the rejection of claim 2 is improper.

The rejections of claims 3-12 and 18 are also improper. These claims recite various ways to fasten a scanning graduation to a housing (claims 3-5) or arranging the scanning graduation with a housing (claims 6-12 and 17-18). The Office Action has provided no motivation for the recited ways of fastening and arranging the scanning graduation, so the rejections of claims 3-12 and 17-18 are improper.

2. Ishizuka et al. and Takamiya et al.

Claims 14-16 were rejected under 35 U.S.C. § 103 as being obvious in view of Ishizuka et al. and Takamiya et al. Applicants traverse this rejection for several reasons. First, claims 14-16 depend indirectly on claim 1. As mentioned above in Section B.1., Ishizuka et al. fails to disclose or suggest either 1) rearranging graduation G2 so that the light beam R reaches it first, 2) using a transmission measuring graduation structure or 3) arranging a measuring graduation structure to be located between the scanning unit and the scanning graduation structure. Takamiya et al. does not cure the deficiencies of Ishizuka et al. since it does not disclose or suggest altering Ishizuka et al.' device so that either 1) Ishizuka et al.'s graduation G2 receives light beam R first, 2) Ishizuka et al. replaces its reflection measuring graduation structure with a transmission graduation structure or 3) Ishizuka et al. arranges its measuring graduation structure to be between a scanning unit and a scanning graduation structure. Without such motivation, the rejection is improper and should be withdrawn.

The rejection is improper for the additional reason that claims 14-16 recite a particular bar height for the measuring graduation. The Office Action has relied on lines 39-41 of Column

3 of Takamiya et al. as suggesting the claimed bar heights. The Office Action further asserts that it would have been obvious to modify the bar height of Takamiya et al. to meet the claim limitations to diffract light more strongly for better signals. Applicants traverse this rejection as being based on pure hindsight. Nowhere is it suggested in either Ishizuka et al. or Takamiya et al. that using the bar heights recited in the claims for Ishizuka et al.'s measuring graduation will result in better signals in Ishizuka et al. The mere assertion that the recited bar heights would have been obvious or would have provided an advantage without any basis for the assertion is clearly based on improper hindsight and Applicants' own disclosure. Without motivation to use the recited bar height, the rejection is improper and should be withdrawn.

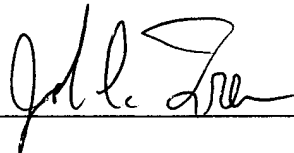
C. New Claim 20

New claim 20 depends directly on claim 1 and so should be patentable for at least the same reasons stated above in Section B.1. Claim 20 is patentable for the additional reason that neither Ishizuka et al. nor Takamiya et al. disclose or suggest a structure such that tilting or tumbling of the scanning graduation structure with respect to the measuring graduation structure does not affect a position of position-dependent signals received by a detector element.

CONCLUSION

In view of the arguments above, Applicants respectfully submit that all of the pending claims 1-20 are in condition for allowance and seek an early allowance thereof. If for any reason, the Examiner is unable to allow the application in the next Office Action and believes that an interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned attorneys at (312) 321-4200.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John C. Freeman", is written over a horizontal line.

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